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REMARKS

The Office rejects claims 1-7 in the subject application. No claims are amended. Claims 1-7 (3 independent claims; 7 total claims) remain pending in the application. Reconsideration of this application is respectfully requested.

35 U.S.C. § 102 REJECTIONS

The Office rejects claims 1, 4, and 7 under 35 U.S.C. § 102(e) as allegedly being unpatentable over Johnson[1]. Applicant respectfully traverses the rejection.

Johnson discloses a system for loading data into a cube forest data structure. In Johnson, a method for structuring data with i key attributes (A1, ...Ai) has the following steps:

> a) defining a first forest F1 as a single node labeled A1;
> b) constructing a subsequent forest Fn as follows:
> i) creating a node n;
> ii) copying a previous forest Fi-1;
> iii) making each tree in the previous forest Fi-1 a subtree of the node n;
> iv) creating another copy of the previous forest Fi-1; and
> v) defining the subsequent forest Fi as a union of the previous forest Fi-1 and a tree rooted at the node n; and
> c) repeating step b) i-1 times until Fi is constructed, where Fi is a data structure.

Johnson indicates that the paths in Fi represent keys of identifying data records.[2]

A method for loading a single tuple into a cube structure F is also disclosed in Johnson. The cube structure F is a collection of indices I1,...In with templates T1,...Tn. Each template is a tree having nodes and the nodes of the tree represent aggregate values to be updated with the single tuple.[3]

But Johnson fails to teach, advise, or suggest "updating a value of the at least one node added to the hierarchical tree and a value of a node on a level higher than that of the at least one node" as recited in claims 1, 4, and 7. Indeed, Johnson uses a recursive method to construct a cube forest. This recursive method constructs the cube forest by starting with node n (Ai) and constructing the next lower node at Fi-1, so that the next lower node of the forest is created.[4] Accordingly, Johnson teaches against "updating a value of the at least one node added to the

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[1] U.S. Patent No. 6,334,125, issued December 25, 2001.
[2] Johnson, column 2, lines 43-60.
[3] Johnson, column 3, line 65 to column 4, line 4.
[4] Johnson, column 13, lines 34-45.

hierarchical tree and a value of a node on a level higher than that of the at least one node" as recited in claims 1, 4, and 7.

Johnson also fails to teach, advise, or suggest "repeating steps (a) through (c) until all the plurality of records are processed, thereby outputting an aggregation result for each of items of the key parameter" as recited in claims 1, 4, and 7. Johnson discloses an aggregate value for an index subkey, which is a catenation of attributes (not one key attribute) from a template tree root to a node.[5] Johnson also discloses an aggregate value for one or more value attributes, but not for a key attribute. Thus, Johnson fails to teach, advise, or suggest "repeating steps (a) through (c) until all the plurality of records are processed, thereby outputting an aggregation result for each of items of the key parameter" as recited in claims 1, 4, and 7.

Therefore, Applicant respectfully requests withdrawal of this rejection.

35 U.S.C. § 103 REJECTIONS

Johnson in view of Bader

The Office rejects claims 2 and 5 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johnson in view of Bader.[6] Based on the foregoing discussion in connection with claims 1 and 4 (from which claims 2 and 5 depend), Johnson is not a proper reference, so that claims 2 and 5 are also patentable over Johnson in view of Bader. Applicant respectfully further traverses the rejection.

Bader discloses a system for maintaining databases using a hierarchical genealogical table. A number of records of information are maintained on a computer in a hierarchical database. Each information record in the database has a unique identifier (i.e., record identifier). Two elements are needed to implement the Bader system: a null value and each record's genealogy. The null value must be lower than the value of all the record identifiers. The genealogy of each record is determined using pointers.[7] An index structure is necessary to point to one or more record identifiers. The index structure indicates attributes of records in the hierarchy with keys (or keywords). Each record is indexed with a keyword value. For example, a keyword of "Company" is set equal to a keyword value of "Acme Distributing".[8]

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[5] Johnson, column 3, lines 1-11.
[6] U.S. Patent No. 5,467,471, issued November 14, 1995.
[7] Bader, column 4, line 42 to column 5, line 20.
[8] Bader, column 6, lines 19-39.

But, as discussed above in connection with claims 1 and 4 (from which claims 2 and 5 depend), Johnson fails to teach, advise, or suggest "updating a value of the at least one node added to the hierarchical tree and a value of a node on a level higher than that of the at least one node". Indeed, the recursive method in Johnson constructs the cube forest by starting with node n (Ai) and constructing the next lower node at Fi-1, so that the next lower node of the forest is created.[9] Accordingly, Johnson teaches away from "updating a value of the at least one node added to the hierarchical tree and a value of a node on a level higher than that of the at least one node" as recited in claims 1, 4, and 7. Thus, it would not have been obvious to modify Johnson to include this missing claimed limitation. Regardless, the combination of Johnson and Bader fail to disclose this claimed limitation. Therefore, Johnson in view of Bader also fails to teach, advise, or suggest "the hierarchical tree is represented by a table including a pointer pointing to one node on a level lower by one than that of each node included in the hierarchical tree, a pointer pointing to one node on a level higher by one than that of each node included in the hierarchical tree" as recited in claims 2 and 5 (which depend from claims 1 and 4).

Thus, the combination of Johnson in view of Bader is missing one or more claimed limitations. Accordingly, Johnson in combination with Bader fails to teach, advise, or suggest one or more of the missing claimed elements. Furthermore, "The factual inquiry whether to combine references must be thorough and searching".[10] "It must be based on objective evidence of record".[11] "This precedent has been reinforced in myriad decisions, and cannot be dispensed with".[12] Accordingly, Applicant submits that the cited art of record contains no teaching, suggestion, or motivation to combine the references as proposed by the Office.[13] Regardless, in light of the foregoing, the combination fails to teach, advise, or suggest the missing claimed elements.

Therefore, Applicant respectfully requests withdrawal of this rejection.

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[9] Johnson, column 13, lines 34-45.

[10] In re Sang Su Lee, 277 F.2d 1338, 1342, 61 U.S.P.Q.2d (BNA) 1430 (Fed. Cir. 2002) (citing McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d (BNA) 1001, 1008 (Fed. Cir. 2001)).

[11] In re Sang Su Lee at 1342.

[12] Id. (citing Brown & Williamson Tobacco Corp. Philip Morris Inc., 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d (BNA) 1456, 1459 (Fed. Cir. 2000) ("a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an obviousness holding'" quoting C.R. Bard, Inc., v. M3 Systems, Inc., 157 F.3d 1340, 1352, 48 U.S.P.Q.2d (BNA) 1225, 1232 (Fed. Cir. 1998); In re Dembiczak, 175 F.3d 994, 999, 50 U.S.P.Q.2d (BNA) 1614, 1617 (Fed. Cir. 1999)).

Johnson in view of Morgenstern

The Office rejects claims 3 and 6 under 35 U.S.C. § 103(a) as allegedly being unpatentable over Johnson in view of Morgenstern.[14] Based on the foregoing discussion in connection with claims 1 and 4 (from which claims 3 and 6 depend), Johnson is not a proper reference, so that claims 3 and 6 are also patentable over Johnson in view of Morgenstern. Applicant respectfully further traverses the rejection.

Morgenstern discloses an integration platform for heterogeneous databases. The Morgenstern system provides integration of information resources, such as relational and object databases, CAD design tools, simulation packages, and data analysis and visualization tools. Morgenstern does this integration using a declarative specification language to represent source and target data representations.[15]

But, as discussed above in connection with claims 1 and 4 (from which claims 2 and 5 depend), Johnson fails to teach, advise, or suggest "updating a value of the at least one node added to the hierarchical tree and a value of a node on a level higher than that of the at least one node". Indeed, the recursive method in Johnson constructs the cube forest by starting with node n (Ai) and constructing the next lower node at Fi-1, so that the next lower node of the forest is created.[16] Accordingly, Johnson teaches away from "updating a value of the at least one node added to the hierarchical tree and a value of a node on a level higher than that of the at least one node" as recited in claims 1, 4, and 7. Thus, it would not have been obvious to modify Johnson to include this missing claimed limitation. Regardless, the combination of Johnson and Morgenstern fail to disclose this claimed limitation. Therefore, Johnson in view of Morgenstern also fails to teach, advise, or suggest "converting the aggregation result for each of the items of the key parameter into the Extensible Markup Language" as recited in claims 3 and 6 (which depend from claims 1 and 4).

Thus, the combination of Johnson in view of Morgenstern is missing one or more claimed limitations. Accordingly, Johnson in combination with Morgenstern fails to teach, advise, or suggest one or more of the missing claimed elements. Furthermore, "The factual

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[13] See ACS Hosp. Systems, Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577 (Fed. Cir. 1984) (teachings of the prior art can be combined to show obviousness only if there is some suggestion or teaching to do so).
[14] U.S. Patent No. 5,970,490, issued October 19, 1999.
[15] Morgenstern, column 3, lines 7-17.
[16] Johnson, column 13, lines 34-45.

inquiry whether to combine references must be thorough and searching".[17] "It must be based on objective evidence of record".[18] "This precedent has been reinforced in myriad decisions, and cannot be dispensed with".[19] Accordingly, Applicant submits that the cited art of record contains no teaching, suggestion, or motivation to combine the references as proposed by the Office.[20] Regardless, in light of the foregoing, the combination fails to teach, advise, or suggest the missing claimed elements.

Therefore, Applicant respectfully requests withdrawal of this rejection.

CONCLUSION

Thus, the Applicant respectfully submits that the present application is in condition for allowance. Reconsideration of the application is thus requested. Applicant invites the Office to telephone the undersigned if he or she has any questions whatsoever regarding this Response or the present application in general.

Respectfully submitted,

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[17] In re Sang Su Lee, 277 F.2d 1338, 1342, 61 U.S.P.Q.2d (BNA) 1430 (Fed. Cir. 2002) (citing McGinley v. Franklin Sports, Inc., 262 F.3d 1339, 1351-52, 60 U.S.P.Q.2d (BNA) 1001, 1008 (Fed. Cir. 2001)).
[18] In re Sang Su Lee at 1342.
[19] Id. (citing Brown & Williamson Tobacco Corp. Philip Morris Inc., 229 F.3d 1120, 1124-25, 56 U.S.P.Q.2d (BNA) 1456, 1459 (Fed. Cir. 2000) ("a showing of a suggestion, teaching, or motivation to combine the prior art references is an 'essential component of an obviousness holding'" quoting C.R. Bard, Inc., v. M3 Systems, Inc., 157 F.3d 1340, 1352, 48 U.S.P.Q.2d (BNA) 1225, 1232 (Fed. Cir. 1998); In re Dembiczak, 175 F.3d 994, 999, 50 U.S.P.Q.2d (BNA) 1614, 1617 (Fed. Cir. 1999)).
[20] See ACS Hosp. Systems, Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577 (Fed. Cir. 1984) (teachings of the prior art can be combined to show obviousness only if there is some suggestion or teaching to do so).